

CIRCULAR NO. 6.

UNIVERSITY OF ILLINOIS.

Agricultural Experiment Station.

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URBANA, ILL., DECEMBER 15, 1897.

THE SUGAR BEET IN ILLINOIS.

The Experiment Station is about to issue a bulletin upon the sugar beet in Illinois. It will be ready in January and will be sent free to all who are upon our mailing list, and to others who may request it.

WHAT THE BULLETIN WILL CONTAIN.—The bulletin will discuss six general subjects as follows: (1) Results of experiments from growing beets in Illinois during the season of 1897. (2) Detailed information upon the growing of beets for commercial purposes. (3) Establishing and conducting factories. (4) Illinois as a sugar producing state. (5) What remains to be learned in Illinois. (6) Plans for future experiments.

RESULTS OF EXPERIMENTS OF 1897.—Over 400 samples of beets have been analyzed from 64 counties in different parts of the state and from a great variety of soil. Though all the growers depended upon printed instructions yet the greater majority of the samples were of excellent quality. Most of the beets returned for analysis was above the grade required for factory use, and in most cases the yield per acre was very satisfactory.

INFORMATION ON THE GROWING OF BEETS.—When it became evident that such flattering possibilities were to appear Professor Holden visited Grand Island and Norfolk, Nebraska, to collect detailed and specific information as to methods and cost of growing upon a commercial scale, the steps to follow and the conditions to be observed in establishing factories, the difficulties and dangers as well as the advantages involved; in short, to bring back for use in this bulletin the elements of success and the sources of failure. This portion of the bulletin will treat at length these practical questions. It will show that the methods of growing beets are radically different from, and in some respects the direct opposite of those successfully employed in the production of other crops. It will show that under the best management it costs about \$32.00 to grow one acre of beets; that the income ranges from \$80.00 per acre under the best conditions down to less than

\$25.00 under careless or ignorant management, and it will show that the failure to observe the best methods, even in a single particular, will surely entail a loss to the farmer. It will establish the fact beyond question that success will depend absolutely upon learning and observing the practices of a new industry rather than upon the use of established methods as employed in the culture of corn.

ESTABLISHING FACTORIES.—It costs \$300,000.00 to build and equip a factory of small capacity, and will take 4,000 acres of beets to support it. This involves not only heavy investment of capital but friendly relations and iron clad five-year contracts with many men. If a factory is built at such enormous expense it must be loyally supported by the surrounding community, and the people must learn correct methods *at once* in order to give this support from the first and not lose money.

ILLINOIS AS A SUGAR PRODUCING STATE.—To produce beet sugar successfully requires good soil, a favorable climate, plenty of coal, lime, and pure water, large capital and definite knowledge of the business of growing beets. Illinois is possessed of all these conditions, except the last, that of knowledge of methods. It is a new industry to us and its details must be learned. There is and will continue to be large money in it when properly conducted, but it is a business that must be run upon a gigantic scale or not at all, and it is one in which failure is so great as to be disastrous. If our people will attack the problem of sugar production seriously and proceed systematically to secure expert knowledge it is believed that few states can excel Illinois as a sugar producing state.

WHAT REMAINS TO BE DONE.—The experiments of 1897 (not a particularly favorable year) show conclusively that we have the soil and climate necessary for beet production, and that this is true for practically all the great sections of the state. We have the coal, the lime, and the water. What we lack and must learn is detailed knowledge of beet production on a commercial scale and on a paying basis. Moreover, before this knowledge can avail whole communities must become interested enough to learn and to work together.

PLANS FOR 1898.—The Station undertook to learn what sections of Illinois can grow sugar beets sufficiently valuable for factory use, and has demonstrated by the analysis of more than 400 samples from trial fields in 64 counties that under proper conditions it is possible to produce beets of excellent quality in all general sections of the state. It has cost the Station so much time and money to establish this fact that the experiment cannot be repeated. No general distribution of beet seed therefore will again be made, neither does the law permit analysis for private individuals. There are, however, many local questions and matters of education in methods of beet culture and in the

establishing of factories that are of fundamental importance to any community that is thinking of growing beets on a commercial scale. The Station desires to be helpful and proposes to coöperate with any locality or organization that is seriously interested and is willing to comply with the following conditions:

1. To secure an organization or some kind of union between not less than five citizens of the community within a radius of five miles from a common center.
2. To raise five trial fields of at least one-fourth acre each in representative soil and according to directions furnished by the Station.
3. To record data and collect samples as directed by the Station.
4. To pay the actual cost of seed, which is slight, and send samples of beets for analysis, transportation prepaid.
5. To send at least one representative to the University for one week to attend lectures and to receive instruction in methods of growing beets and in precautions to be observed in attempting to establish the industry.

For this purpose the University will arrange to give instruction as indicated above for a period of one week, from the time of the closing of the State Farmers' Institute, February 24, 1898, and besides will perform all analyses involved in such an arrangement free of cost.

This feature of a week's instruction at the University may seem unnecessary after the exhaustive bulletin published by the Station. But it must not be forgotten that this is one of the most peculiar branches of agriculture, and that there is much to be learned; that in Germany and France schools exist for the special purpose of instruction in the culture of the sugar beet, and that the entire business of sugar production is in the hands of experts so instructed. Anything beyond what has already been done in Illinois must be done most systematically in order to yield beneficial results. Experience elsewhere shows that attempts to establish the industry without especial instruction lead almost certainly to failure. This plan is designed to prevent failure and to do everything possible to insure success wherever the attempt shall be made. Communities desiring this assistance should arrange in advance upon the plan indicated above.

NOTICE.

The Station publishes at least four bulletins a year but at irregular intervals. They treat of various subjects and are mailed to all addresses upon the regular mailing list. If you write for this bulletin and desire your name placed upon the mailing list for other bulletins say so definitely. Do not ask for this or any other especial bulletin if you have been receiving our publications before as that is evidence that your name is upon the permanent list.